

CLAIMS

1. Ballasting device for a crane, in particular for a tower crane, combining ballast blocks (3) that can be stacked onto a base frame (39) of the crane, and a gripper (2) for handling the ballast blocks (3), the gripper (2) being designed to be connected, during use, to a handling means, this device comprising means of nonpermanent connection, by hooking, between the gripper (2) and a ballast block (3), and also means for centering the stacked ballast blocks (3) relative to one another, characterized in that the aforementioned means of nonpermanent connection comprise two opposed gripping hooks (15, 16) mounted pivotably, about horizontal pins (10), in the end regions of a lifting beam (4) of the gripper (2), each gripping hook (15, 16) having, on one side of its pivot pin (10), a hooking catch (17) designed to interact with a transverse pin (35) placed in a corresponding housing (33) of a ballast block (3), and, on the other side of its pivot pin (10), a rear part (18) attached to a sling (27, 28) by which the gripper (2) is suspended from the hoisting cable, each gripping hook (15, 16) being assigned a lock (21, 22) that is borne by the lifting beam (4) and designed to temporarily keep the corresponding gripping hook (15, 16) in the position in which the transverse pin (35) is released.

2. Ballasting device for a crane according to Claim 1, characterized in that the lifting beam (4) is constituted by two parallel bars or profiles (5, 6) that are secured to one another with a longitudinal gap (7) left between them, so as to form, at the two ends of the lifting beam (4), clevises serving for the articulation of the two suspension hooks (15, 16).

3. Ballasting device for a crane according to Claim 2, characterized in that vertical protective plates are fastened onto the two bars or profiles (5,

6) of the lifting beam (4), these plates protecting the region in which the rear part (18) of the gripping hooks (15, 16) travels.

5 4. Ballasting device for a crane according to any one of Claims 1 to 3, characterized in that the rear part (18) of each gripping hook (15, 16) itself constitutes, or bears, a counterweight.

10 5. Ballasting device for a crane according to any one of Claims 1 to 4, characterized in that each sling (27, 28) forms an angle of less than 180° with the longitudinal axis of the corresponding gripping hook (15, 16).

15 6. Ballasting device for a crane according to any one of Claims 1 to 5, characterized in that each lock (21, 22) of the gripper (2) is a lock mounted pivotably about a horizontal pin (11) borne by the lifting beam, 20 the lock (21, 22) having a bent shape, with a lower part (23) forming a counterweight, and an upper part (24) that forms a locking catch and is provided with a ramp (24) intended to interact with a control finger (19) borne by the rear part of the corresponding 25 gripping hook (15, 16).

7. Ballasting device for a crane according to any one of Claims 1 to 6, characterized in that the ballast blocks (3), made essentially of concrete, each comprise 30 two metal grip parts (33), embedded in the concrete, that each delimit a housing capable of partially receiving a gripping hook (15, 16), each metal grip part (33) being provided with a transverse pin (35) passing through the housing delimited by said part and 35 designed to interact with the locking catch (17) of a gripping hook (15, 16) engaged in this housing.

8. Ballasting device for a crane according to Claim 7, characterized in that two right-angle

positioning brackets (8, 9) are fastened under the lifting beam (4), these brackets being designed to interact, respectively, with the upper edges of the housings delimited by the two grip parts (33) of a ballast block (3).

9. Ballasting device for a crane according to any one of Claims 1 to 8, characterized in that the means for centering the stacked ballast blocks (3) relative to one another comprise, on each ballast block (3), conical centering pegs (37) that protrude above the upper face of the ballast block (3), and corresponding housings (38) of flared shape, in particular of conical or pyramidal shape, that open out in the lower face of the ballast block (3).

10. Ballasting device for a crane according to Claim 9, characterized in that one of the housings (38) of flared shape of each ballast block (3) has the general shape of a pyramid of rectangular base elongated in the longitudinal direction of this ballast block (3).

11. Ballasting device for a crane according to Claims 2 and 9 together, characterized in that the centering pegs (37) and the corresponding housings (38) belong to metal centering parts (34), each metal centering part (34) extending vertically over one side of a metal grip part (33) and being attached to the latter (at 36) to constitute a single metal insert (31, 32) embedded in the concrete of the ballast block (3).

12. Ballasting device for a crane according to any one of Claims 1 to 11, characterized in that the lifting beam (4) is provided at its ends with rings (12, 13) designed to receive a guide rope (14) that can be used while handling a ballast block (3) hooked in under the lifting beam (4).